

CLAIMS

What is claimed is:

1. A centrifugal clutch assembly comprising:
 - a clutch cover attachable to a rotatable input member;
 - a friction plate;
 - a pressure plate movable between a clamped position engaging said friction plate and an open position released from said friction plate;
 - a plurality of weights movable to drive said pressure plate between said clamped and open positions; and
 - a sleeve engageable to said pressure plate for moving said pressure plate between said clamped and open positions independent of said plurality of weights.
2. The assembly as recited in claim 1, comprising a front plate axially movable responsive to radial movement of said plurality of weights.
3. The assembly as recited in claim 2, wherein said front plate comprises a ramped surface and each of said plurality of weights includes a roller movable along said ramped surface.
4. The assembly as recited in claim 2, comprising a clamp spring disposed between said front plate and said pressure plate.

5. The assembly as recited in claim 4, wherein said plurality of weights move said front plate to compress said clamp spring.

6. The assembly as recited in claim 4, wherein said sleeve moves said pressure plate axially to override a biasing force of said clamp spring.

7. The assembly as recited in claim 6, comprising a drive for moving said sleeve between said clamped and open positions.

8. The assembly as recited in claim 7, wherein said drive comprises a hydraulic cylinder.

9. The assembly as recited in claim 7, wherein said drive comprises a pneumatic cylinder.

10. The assembly as recited in claim 7, wherein said drive comprises an electromechanical device.

11. The assembly as recited in claim 1, comprising a plurality of friction disks and a plurality of pressure plates.

12. The assembly as recited in claim 11, wherein said sleeve moves a first pressure plate adjacent a clamp spring.

13. The assembly as recited in claim 12, wherein said sleeve moves said first pressure plate axially independent of rotational speed of said clutch assembly.

14. A method of controlling a clutch assembly comprising the steps of:
 - a) monitoring vehicle operating input;
 - b) monitoring vehicle operating output;
 - c) detecting a fault condition responsive to monitored operating outputs outside of a desired range relative to the monitored operating inputs; and
 - d) disengaging transmission of torque through a driveline responsive to said detected fault condition.
15. The method as recited in claim 14, wherein said step d) comprises opening the clutch assembly.
16. The method as recited in claim 15, wherein said clutch assembly is a centrifugal clutch comprising a plurality of weights movable radially outward responsive to rotation to begin actuation of the clutch assembly, and said step d) further comprises overriding said plurality of weights to open said clutch assembly.
17. The method as recited in claim 14, wherein the driveline comprises a second clutch assembly, and said step d) comprises opening said second clutch assembly.
18. The method as recited in claim 14, wherein one of said inputs comprises a throttle position.

19. The method as recited in claim 14, wherein one of said inputs comprises engine speed.

20. The method as recited in claim 14, wherein one of said inputs comprises brake pedal position.

21. The method as recited in claim 14, wherein said output comprises clutch assembly position.